

IN THE CLAIMS:

9. (Thrice amended) A process for the production of plants with improved growth characteristics, which comprises the following steps:

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- a) transferring and integrating a nucleic acid encoding a polypeptide coding region comprising a prokaryotic asparagine synthetase coding region linked to a chloroplast leader sequence for import of the asparagine synthetase into chloroplasts or plastids of a plant cell, wherein said nucleic acid is operatively linked to a regulatory sequence for expression in said plant cell;
- b) transferring and integrating a nucleic acid for expression of an antisense chloroplastic glutamine synthetase RNA or portion thereof comprising transferring and integrating an anti-sense chloroplastic glutamine synthetase nucleic acid operatively linked to a regulatory sequence for expression of said anti-sense RNA or portion thereof in said cell to make a transformed cell; and
- c) regenerating intact and fertile plants from the transformed cells.

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11. (Thrice amended) A plant cell obtainable by the method of claim 9, comprising:

- a) a nucleic acid encoding a polypeptide coding region comprising a prokaryotic asparagine synthetase coding region linked to a chloroplast leader sequence for import of the asparagine synthetase into chloroplasts or plastids of a plant cell, wherein said nucleic acid is operatively linked to a regulatory sequence for expression in said plant cell; and
- b) a second nucleic acid for expression of an anti-sense RNA to an endogenous chloroplastic glutamine synthetase gene or portion thereof comprising a nucleic acid comprising an endogenous chloroplastic glutamine synthetase or portion thereof in an anti-sense orientation operatively linked to a regulatory sequence, said second nucleic acid providing reduced levels of endogenous chloroplastic glutamine synthetase activity upon expression of said anti-sense RNA in said cell.

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12. (Amended) A plant, seed or propagule containing a cell according to claim 11.

13. (Twice amended) A gene construct comprising a nucleic acid encoding a polypeptide coding region comprising a prokaryotic ammonium specific asparagine synthetase coding region linked to a chloroplastic leader sequence for import of the asparagine synthetase

into the chloroplasts or plastids of a plant cell, and which construct is operatively linked to a regulatory sequence for expression in said plant cell, and wherein said plant cell exhibits the biochemical activity of the imported asparagine synthetase in its chloroplasts or plastids.

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14. (Twice amended) A gene construct according to claim 13, wherein the prokaryotic asparagine synthetase polypeptide coding region is linked at its N-terminus to a modified transit peptide coding region from the small subunit of the Ribulosebisphosphate carboxylase from pea comprising a duplication of 20 amino acids from said transit peptide coding region.

15. (Thrice amended) A vector comprising the gene construct according to claim 13.

16. (Amended) A plant cell transformed with the gene construct according to claim 13 or 14, or with the vector according to claim 15.